BRUHAT BANGALORE MAHANAGARA PALIKE
BYATARAYANAPURA DIVISION

Name of Work:

The Work of Providing and laying of 600 mm dia. RCC Sewerage pipeline from Elements Mall SWD To Thanisandra BBMP office (Near Railway Underpass) along Thanisandra Main road coming under Ward no.6- Thanisandra, Byatarayanapura sub division.

TEST REPORTS

TEJUS CONSULTANTS
CONSULTING ENGINEERS AND DESIGNERS
No.58 MIG, 6th Cross, 3rd Main
1st Stage, Basaveshwaranagar
Bangalore-560079
☎ 080 - 23287532
email: tejusconsultants@gmail.com

Scanned by CamScanner

TEJUS
CONSULTANTS

No. BBMP/EE/BTP/WO/ 450 /2020-21

To
Executive Engineer
Byatarayanapura Division
Bruhat Bangalore Mahanagara Palike
Bangalore – 560 092

Date

Dear Sir

Sub: Providing and laying of 600 mm dia. RCC Sewerage pipeline from Elements Mall SWD to Thanisandra BBMP office (Near Railway Underpass) along Thanisandra Main road coming under Ward no.6- Thanisandra, Byatarayanapura sub division.

In reference to the above subject, this is to bring to your kind notice that we have scrutinized the **First and FINAL bill** submitted by M/s **D.R Infrastructure,** towards the above said work and arrived at an amount of **12058831.00 (Rupees One Crore Twenty Lakhs Fifty Eight Thousand Eight Hundred Thirty One Only)** the work has been completed satisfactorily.

This is for your kind information.

Thank you and assuring you the best of our Services at all the times

For Tejus Consultants
(Nischal M)

Scanned by CamScanner

TEJUS
CONSULTANTS

Project	The Work of Providing and laying of 600 mm dia RCC Sewerage pipeline from Elements Mall SWD To Thanisandra BBMP office (Near Railway Underpass) along Thanisandra Main road coming under Ward no.6- Thanisandra, Byatarayanapura sub division.	
Client	Bruhat Bengaluru Mahanagara Palike	
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore	
Contractor	D.R Infrastructure,	
Field Dry Density test by Sand Replacement Method (As per IS 2720 (Part 28)		
	Date:	08-07-2020
Layer no. or level	WMM I layer	
Depth of hole	200mm	
Field density:	**1**	**2**
Wt. of wet material from hole (Ww) gms.	5964	5993
Wt. of sand+cylinder before pouring (w1) gms.	15000	15000
Wt. of sand+cylinder after pouring (w2) gms.	10595	10598
Wt. of sand in hole+ cone (w3) gms.	4405	4402
Wt. of cone gms.	1080	1080
Wt. of sand gms.	3325	3322
Bulk density of sand (γs)gm/cc	1.32	1.32
Bulk density of material(i.e. wt. of the wet material) (γb)=(Ww/w4*(γs))gm/cc	2.37	2.38
Moisture meter reading(moisture content)	6.40	6.20
Result		
FDD(Wt.of the dry material)=(100γb/100+mc)gm/cc	2.23	2.24
MDD	2.27	2.27
OMC	6.10%	6.10%
% compaction obtained	98.03	98.78
% compaction required	98%	98%

ಸಹಾಯಕ ಅಧಿಯಂತರವರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ., ಬೆಂಗಳೂರು-26

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

TEJUS CONSULTANTS

Consultant's Representative

Scanned by CamScanner

GRADATION FOR GSB

(As per MORT&H 400-1,Grading-II)

Name of Work	:	The Work of Providing and laying of 600 mm dia RCC Sewerage pipeline from Elements Mall SWD To Thanisandra BBMP office (Near Railway Underpass) along Thanisandra Main road coming under Ward no.6- Thanisandra, Byatarayanapura sub division.
Client	:	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant	:	M/s Tejus Consultants
Name of Agency	:	D.R Infrastructure
Date of Testing	:	08-07-2020
Type of Mix	:	GSB
Sample I/D	:	GSB1

Sample Location:	At plant	**Date of Sampling:**	08-07-2020
		Date of testing:	08-07-2020
Type of material & Purpose:	GSB	**Oven Dry Wt.(gms):**	10000.0

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
75	0	0	0.00	100.00	-
53	0	0	0.00	100.00	100.00
26.5	2118	2118	21.18	78.82	70-100
9.5	2620	4738	47.38	52.62	50-80
4.75	893	5631	56.31	43.69	40-65
2.36	1210	6841	68.41	31.59	30-50
0.425	1944	8785	87.85	12.15	10-15
0.075	825	9610	96.10	3.90	<5
Pan	390.0				
Total	10000.0				

Note:
1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory/Site.
3. Any Query regarding the report must be reported reported within 15days from the date of testing.

TEJUS CONSUATANTS

Authorised Signatory

Scanned by CamScanner

TEJUS
CONSULTANTS

Project	The Work of Providing and laying of 600 mm dia RCC Sewerage pipeline from Elements Mall SWD To Thanisandra BBMP office (Near Railway Underpass) along Thanisandra Main road coming under Ward no.6-Thanisandra, Byatarayanapura sub division.		
Client	BRUHAT BANGALORE MAHANAGARA PALIKE		
Consultant	M/s Tejus Consultants		
Contractor	D.R Infrastructure		
Field Dry Density test by Sand Replacement Method (As per IS 2720 (Part 28))			
Date of Testing	**20-07-2020**		
Layer no. or level	GSB layer		
Depth of hole	200mm		
@ Chainage	**MH11 to MH12**	**MH23 to MH24**	**MH35 to MH36**
Field density:	**1**	**2**	**3**
Wt. of wet material from hole (Ww) gms.	5972	5964	5952
Wt. of sand+cylinder before pouring (w1) gms.	15000	15000	15000
Wt. of sand+cylinder after pouring (w2) gms.	10580	10590	10570
Wt. of sand in hole+ cone (w3) gms.	4420	4410	4430
Wt. of cone gms.	1080	1080	1080
Wt. of sand gms.	3340	3330	3350
Bulk density of sand (γs)gm/cc	1.32	1.32	1.32
Bulk density of material(i.e. wt. of the wet material) (γb)=(Ww/w4*(γs))gm/cc	2.36	2.36	2.35
Moisture meter reading(moisture content)	6.23	6.30	6.30
Result			
FDD(Wt.of the dry material)=(100γb/100+mc)gm/cc	2.22	2.22	2.21
MDD	2.25	2.25	2.25
OMC	6.30%	6.30%	6.30%
% compaction obtained	98.75	98.84	98.06
% compaction required	98%	98%	98%

Note:
1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory/Site.
3. Any Query regarding the report must be reported reported within 15days from the date of testing.

ಸಹಾಯಕ ಅಧಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬ.ಬಿ.ಬಂ.ಪ

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಧಿಯಂತರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬ.ಬಿ.ಬಂ.ಪ., ಬೆಂಗಳೂರು-26

Authorised Signatory

Scanned by CamScanner

TEJUS
CONSULTANTS

FLAKINESS AND ELONGATION INDICES (IS 2386, PART 1)	
Project	The Work of Providing and laying of 600 mm dia RCC Sewerage pipeline from Elements Mall SWD To Thanisandra BBMP office (Near Railway Underpass) along Thanisandra Main road coming under Ward no.6- Thanisandra, Byatarayanapura sub division.
Client	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant	M/s Tejus Consultants
Name of Agency	D.R Infrastructure,

Type of Material	WMM	Proposed Use	WMM
Sample Location	At plant	Date of Sampling	08-07-2020
		Date of Testing	08-07-2020

Size of aggregate		Flakiness Index		Elongation Index	
Passing through IS sieve, mm	Retained on IS sieve, mm	Total wt. of aggregate retained on sieves (A) gms.	Wt. of aggregate passing from Flakiness gauge (B) gms	Wt. of aggregate retained on Flakiness gauge (C) gms	Wt. of aggregate retained on Elongation gauge after retained on Flakiness gauge(D)gms
63.0	50.0	0	0	0	0
50.0	40.0	0	0	0	0
40.0	31.5	0	0	0	0
31.5	25.0	0	0	0	0
25.0	20.0	0	0	0	0
20.0	16.0	852	76	776	54
16.0	12.5	1210	114	1096	126
12.5	10.0	440	68	372	64
10.0	6.3	498	56	442	34
Total		**3000**	**314**	**2686**	**278**

Note: Minimum 200 Pcs should be taken on each fraction of test

Flakiness Index(%):	10.47
Elongation Index(%):	10.35
Combined FI+EL (%)	20.82

Note:
1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory/Site.
3. Any Query regarding the report must be reported reported within 15days from the date of testing.

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ., ಬೆಂಗಳೂರು-24

TEJUS CONSULTANTS

Authorised Signatory

Scanned by CamScanner

TEJUS
CONSULTANTS

AGGREGATE IMPACT VALUE
(IS: 2386 Part - 4)

Project	The Work of Providing and laying of 600 mm dia RCC Sewerage pipeline from Elements Mall SWD To Thanisandra BBMP office (Near Railway Underpass) along Thanisandra Main road coming under Ward no.6- Thanisandra, Byatarayanapura sub division.		
Client	BRUHAT BANGALORE MAHANAGARA PALIKE		
Consultant	M/s Tejus Consultants		
Name of Agency	D.R Infrastructure		
Proposed Use	WMM	**Date of Sampling**	08-07-2020
Sample Location	At plant	**Date of Testing**	08-07-2020

Sl. No.	Description		Test No. 1	Test No. 2	Test No. 3	Spec Limit (%)
1	Wt. of stone pieces (dry) passing IS Sieve 12.5mm but retained in IS sieve 10mm (gm)	(Wa)	372.00	358.00	368.00	
2	Wt. of the fraction retained in IS sieve 2.36mm after the impact test (gm)	(Wb)	282.00	272.00	278.00	
3	Wt. of the fraction passed in IS sieve 2.36mm after the impact test (gm)	(Wc)	90.00	86.00	90.00	
4	Aggregate Impact Value (%)	(Wc/Wa)* 100	24.19	24.02	24.46	
5	Average Aggregate impact value	(%)	24.22			Max - 30 %

Remarks : Satisfactory / Not Satisfactory

Note:
1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory/Site.
3. Any Query regarding the report must be reported reported within 15days from the date of testing.

TEJUS CONSULTANTS

Authorised Signatory

ಸಹಾಯಕ ಅಧಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ., ಬೆಂಗಳೂರು-24

Scanned by CamScanner

TEJUS

Project	The Work of Providing and laying of 600 mm dia RCC Sewerage pipeline from Elements Mall SWD To Thanisandra BBMP office (Near Railway Underpass) along Thanisandra Main road coming under Ward no.6- Thanisandra, Byatarayanapura sub division.	
Client	Bruhat Bengaluru Mahanagara Palike	
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore	
Contractor	D.R Infrastructure,	
Field Dry Density test by Sand Replacement Method (As per IS 2720 (Part 28)		
	Date:	22-07-2020
Layer no. or level	WMM I layer	
Depth of hole	200mm	
Chainages	MH12 to MH13	MH26 to MH28
Field density:	1	2
Wt. of wet material from hole (Ww) gms.	5964	5993
Wt. of sand+cylinder before pouring (w1) gms.	15000	15000
Wt. of sand+cylinder after pouring (w2) gms.	10595	10598
Wt. of sand in hole+ cone (w3) gms.	4405	4402
Wt. of cone gms.	1080	1080
Wt. of sand gms.	3325	3322
Bulk density of sand (γs)gm/cc	1.32	1.32
Bulk density of material(i.e. wt. of the wet material) (γb)=(Ww/w4*(γs))gm/cc	2.37	2.38
Moisture meter reading(moisture content)	6.40	6.20
Result		
FDD(Wt.of the dry material)=(100γb/100+mc)gm/cc	2.23	2.24
MDD	2.27	2.27
OMC	6.10%	6.10%
% compaction obtained	98.03	98.78
% compaction required	98%	98%

Consultant's Representative

ಸಹಾಯಕ ಅಧಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಧಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ., ಬೆಂಗಳೂರು-24

Scanned by CamScanner

TEJUS
CONSULTANTS

Aggregate Impact Value

IS: 2386 Part IV

Client	**BRUHAT BANGALORE MAHANAGARA PALIKE**
Agency	**D.R Infrastructure**
Name of the Work	The Work of Providing and laying of 600 mm dia RCC Sewerage pipeline from Elements Mall SWD To Thanisandra BBMP office (Near Railway Underpass) along Thanisandra Main road coming under Ward no.6-Thanisandra, Byatarayanapura sub division.
Source / Location	Hot Mix Plant, Bangalore
Type of Mix	Semi Dense Bituminous Concrete
Date of Testing	04-08-2020
Consultant	M/s Tejus Consultants

Sl No.	Details	Trial No.		Average
		1	2	
1.	Total weight of aggregate sample filling the cylindrical measure = W_1 g	372	372	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	270	275	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	102	97	
4	Aggregate Impact value = percent fines 100* (W_2/W_1) percent	27.42	26.08	26.75

Comments:

→ Maximum allowable Aggregate Impact value for Semi Dense Bituminous Concrete is 24%

Note:

⇒ This test report should not be reproduced except in full, without written approval of the laboratory

⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory

⇒ Any Query regarding the report must be reported within 15 days from the date of testing.

TEJUS CONSULTANTS

Authorised Signatory

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಧಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ., ಬೆಂಗಳೂರು-24

Scanned by CamScanner

TEJUS
CONSULTANTS

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**BRUHAT BANGALORE MAHANAGARA PALIKE**
Agency	**D.R Infrastructure**
Name of Work	The Work of Providing and laying of 600 mm dia RCC Sewerage pipeline from Elements Mall SWD To Thanisandra BBMP office (Near Railway Underpass) along Thanisandra Main road coming under Ward no.6- Thanisandra, Byatarayanapura sub division.
Technical Reference	IS 2386(Part 1) 1963 (RA 2007)
Type of Mix	Semi Dense Bituminous Concrete
Consultants	Tejus Consultants
Date of Testing	04-08-2020

Result : Flakiness Index = **25.00%**

Elongation Index = **27.00%**

Result : Combined Flakiness & Elongation index

Comments:

→ Maximum allowable Flakiness & Elongation Index for Semi Dense Bituminous Concrete is 30%

Note:

→ This test report should not be reproduced except in full, without written approval of the laboratory

→ The results indicated above are based on the tests carried out on the samples recieved in the laboratory

→ Any Query regarding the report must be reported within 15 days from the date of testing.

TEJUS CONSULTANTS

Authorised Signatory

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ., ಬೆಂಗಳೂರು-24

Scanned by CamScanner

TEJUS
CONSULTANTS

Aggregate Gradation Test

IS : 2386 Part I

Client	BRUHAT BANGALORE MAHANAGARA PALIKE
Agency	D R Infrastucture
Name of theWork	The work of Providing and laying of 600 mm dia RCC Sewerage pipeline from Elements Mall SWD to Thanisandra BBMP office (Near Railway Underpass) along Thanisandra Main road coming under Ward no.6-Thanisandra, Byatarayanapura sub division.
Sample I / D	Hot Mix Plant, Bangalore
Type of Mix	Semi Dense Bituminous Concrete
Date of Testing	20-07-2020 10-8-2020

Total Weight of Sample: **1200** gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	JOBMIX Gradation as per MORTH	Remarks
13.2	0	0	0.00	100.00	100	Gradation satisfies Semi Dense Bituminous concrete Grade-II specification as per MORTH
9.5	98	98.00	8.17	91.83	90-100	
4.75	522	620.00	51.67	48.33	35-51	
2.36	143	763.00	63.58	36.42	24-39	
1.18	105	868.00	72.33	27.67	15-30	
0.3	110	978.00	81.50	18.50	9-19	
0.075	150	1128.00	94.00	6.00	3-8	

Total Weight of Sample: **1200** gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	JOBMIX Gradation as per MORTH	Remarks
13.2	0	0	0.00	100.00	100	Gradation satisfies Semi Dense Bituminous concrete Grade-II specification as per MORTH
9.5	100	100.00	8.33	91.67	90-100	
4.75	520	620.00	51.67	48.33	35-51	
2.36	145	765.00	63.75	36.25	24-39	
1.18	110	875.00	72.92	27.08	15-30	
0.3	115	990.00	82.50	17.50	9-19	
0.075	145	1135.00	94.58	5.42	3-8	

Note:

⇒ This test report should not be reproduced except in full, without written approval of the laboratory

⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory

⇒ Any Query regarding the report must be reported within 15 days from the date of testing.

TEJUS CONSULTANTS
No. 58, 3rd main, 6th Cross, 1st Stage KHB Colony, Basaveshwaranagar, Bangalore - 560079. ☎ +91 80 23287532, tejusconsultants@gmail.com

Scanned by CamScanner

DETERMINATION OF RATE OF SPREAD TACK COAT

Name of Work :	The work of Providing and laying of 600 mm dia RCC Sewerage pipeline from Elements Mall SWD to Thanisandra BBMP office (Near Railway Underpass) along Thanisandra Main road coming under Ward no.6- Thanisandra, Byatarayanapura sub division.
Client :	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant :	M/s Tejus Consultants
Contractor :	D R Infrastucture
Date of Testing :	10-08-2020
Type of Mix :	Tack coat
Sample I/D :	1

Determination	Unit	Test No		
		1	2	3
Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30	0.30 x .30
Area of Plate (a)	Sq.mtr	0.09	0.09	0.09
Initial Wt of empty Plate (b)	Kg	0.768	0.758	0.755
Final weight of plate after application of tack Coat (c)	Kg	0.791	0.781	0.778
Weight of tack Coat (d=c-b)	Kg	0.023	0.023	0.023
Rate of spread of tack coat	Kg/sq.m	0.250	0.256	0.251
Average	Kg/sq.m	0.252		
Specified Limit	Kg/sq.m	**0.250 Kg/sq.m**		

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory/Site.
3. Any Query regarding the report must be reported reported within 15days from the date of testing.

TEJUS CONSULTANTS

Authorised Signatory

ಸಹಾಯಕ ಅಧಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಧಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ., ಬೆಂಗಳೂರು-24

Scanned by CamScanner

TEJUS
CONSULTANTS

TEST REPORT ON STABILITY OF MIX

Client	:	**BRUHAT BANGALORE MAHANAGARA PALIKE**
Agency	:	**D R Infrastucture**
Name of the Work	:	The work of Providing and laying of 600 mm dia RCC Sewerage pipeline from Elements Mall SWD to Thanisandra BBMP office (Near Railway Underpass) along Thanisandra Main road coming under Ward no.6- Thanisandra, Byatarayanapura sub division.
Source of location	:	Hot mix Plant, Bangalore
Type of Mix	:	Semi Dense Bituminous Concrete
Date of Testing	:	07-08-2020
Consultant		M/s Tejus Consultants

The results of the tests conducted on the Semi Dense Bituminous Concrete mix sample are as follows:

Sl. No	Description	Test Result 1	Test Result 2	Requirement as per MORTH (Table 500-19)
1	Marshal Stability, Kn	12	14	9 Kn (min)
2	Marshal flow, mm	3	2	2 – 4
3	Percent air voids in Mineral Aggregate	14	13	13 – 15
4	Voids in Compacted Mix	4	5	3 – 6
5	Percent Voids filled with Bitumen	67	72	65 - 75
6	Density, g/cc			--

Note:

⇒ This test report shall not be reproduced except in full, without written approval of the laboratory.

⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒ Any Query regarding the report must be reported within 15 days from the date of testing.

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ, ಬೆಂಗಳೂರು-24

TEJUS CONSULTANTS

Authorised Signatory

TEJUS CONSULTANTS
No. 59, 3rd main, 6th Cross, 1st Stage KHB Colony, Basaveshwaranagar, Bangalore - 560079. O: +91 80 23287533 tejusconsultants@gmail.com

Scanned by CamScanner

TEJUS

BITUMEN CONTENT AND GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

AASHTO T 164 & AASHTO T 30

CLIENT	BRUHAT BANGALORE MAHANAGARA PALIKE
AGENCY	D R Infrastucture
NAME OF THE WORK	The work of Providing and laying of 600 mm dia RCC Sewerage pipeline from Elements Mall SWD to Thanisandra BBMP office (Near Railway Underpass) along Thanisandra Main road coming under Ward no.6-Thanisandra, Byatarayanapura sub division.
SAMPLE ID	At Site
DATE OF TESTING	10-08-2020
Consultant	M/s Tejus Consultants

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	864.00	870.00
2. Weight of Mixture after Test, g	818.00	825.00
3. Weight of Asphalt and Mineral matter Extracted, g	46.00	45.00
4. Weight of Mineral Matter, g.	2.00	2.00
5. Weight of Ash, g	2.00	2.00
6. Weight of Bitumen Extracted, g. (corrected)	48.00	47.00
7. Bitumen content in %	5.56	5.40
8. Average	5.48	

GRADATION AFTER EXTRACTION

818

SIEVE SIZE	Trail 1				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0.00	100	100
9.5	60	60.00	7.33	92.67	90-100
4.75	350	410.00	50.12	49.88	35-51
2.36	102	512.00	62.59	37.41	24-39
1.18	86	598.00	73.11	26.89	15-30
0.3	92	690.00	84.35	15.65	9-19
0.075	80	770.00	94.13	5.87	3-8

SIEVE SIZE	Trail 2				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0.00	100	100
9.5	55	55.00	6.72	93.28	90-100
4.75	360	415.00	50.73	49.27	35-51
2.36	110	525.00	64.18	35.82	24-39
1.18	87	612.00	74.82	25.18	15-30
0.3	95	707.00	86.43	13.57	9-19
0.075	70	777.00	94.99	5.01	3-8

Information is furnished by the Client

Note:

- This test report should not be reproduced except in full, without written approval of the laboratory
- The results indicated above are based on the tests carried out on the samples received in the laboratory
- Any Query regarding the report must be reported within 15 days from date of testing

ಸಹಾಯಕ ಅಧಿಯಂತರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ ವ್ಯಾಪ್ತಿಯನಗರ ಉಪ ವಿಭಾಗ

TEJUS CONSULTANTS

Authorised Signatory

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ವ್ಯಾಪ್ತಿಯನಗರ ಉಪ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ., ಬೆಂಗಳೂರು-24

TEJUS CONSULTANTS
No. 58, 3rd main, 6th Cross, 1st Stage KHB Colony, Basaveshwaranagar, Bangalore - 560079. O : +91 80 23287532, tejusconsultants@gmail.com

Scanned by CamScanner